

change which comes over the 'face of the deep' when the bold promontory of Hartland affords us no longer its friendly shelter on our passage to the 'isle of rats,' her remarks are painfully suggestive of the past: "Ah! how the coast and sea alter as you pass Hartland Point! No gentle wavelets ripple over the sand, but sturdy Atlantic billows, rolling in from the far west, come bounding over the stony strand, and leap high into the air as they strike against the projecting masses of rock." (p. 26.)

Her picture, too, of Clovelly is manifestly 'drawn from the life;' as is also that of the entrance into it, by the well-known "Hobby-drive,"—"a road terraced along the cliff, winding in and out through deep wooded glens and over trickling streams; whilst, below, the blue sea shines between the branches, and the waves make gentle moan upon a beach you cannot see" (p. 28). Clovelly is indeed a wonderful spot, and "any one," says our authoress, "who would venture down its street must leave his dignity behind him, and get down as best he can,—fortunate if he have not a hard tumble or two by the way." Another writer has aptly described it as "a small fishing-village built on the steep slope of a cliff, and looking almost as if the whole place had been wrecked from some large ship, and had cleverly contrived to scramble on shore, and clamber up the rocks just beyond high-water mark, but had never been able to reach the summit\*."

In the concluding portion of her volume, Mrs. Chanter pilots us through the 'pixied haunts' of Dartmoor, and leads us into many a wild and unvisited retreat. From the top of Lustleigh Cleve she surveys, amidst craggy Tors, the teeming valleys beneath,—and taking up her harp, in all the warmth of a poetic imagination, exclaims: "It is a place in which one longs to linger and drink in all its charms. It is a place from which one cannot turn without a sigh of regret; a place that comes back in pleasant dreams of happy hours; a place one seems to have known somewhere, somehow,—long, long ago." (p. 67.)

The last chapter of this little book contains some directions on the cultivation of ferns, and the three or four preceding ones descriptions of the species of these plants, referred to in other parts of the work. These descriptions appear to be copied for the most part from Mr. Moore's works, and they are illustrated by some pretty good coloured figures.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

November 13, 1855.—Dr. Gray, F.R.S., in the Chair.

CHARACTERS OF SOME APPARENTLY NEW SPECIES OF BUCCONIDÆ. By PHILIP LUTLEY SCLATER, M.A., F.L.S.

#### 1. BUCCO HYPERRHYNCHUS.

*Tamatia hyperrhynchus*, Bp. MS. et Consp. Vol. Zygodact. p. 13.  
*B. supra fulgenti-niger; fronte lata et superciliis anticis albis:*

\* June: a Book for the Country in Summer-time. By H. T. Stainton (London, 1856), p. 65.

*subtus albus, nigro late torquatus; lateribus nigro radiatis: rostro maximo.*

Long. tota 10·5; alæ 4·5; caudæ 3·5; rostri a rictu 2·1.

*Hab.* In regionibus fl. Amazonum superioris (*Hawaxwell*). Mus. Paris. et P. L. S.

When I drew up the characters of *Bucco macrorhynchus*, as given in the 'Annals of Nat. Hist.' for May 1854, p. 357, I had not in my possession specimens of the true *macrorhynchus* from Cayenne, and consequently confounded with it the present bird. But the much larger size of the bill and whole body, the greater extension of the white colour on the front, the narrower black band and the total absence of any fawn-coloured tinge on the belly and vent are quite sufficient to distinguish this *Bucco* from its Cayenne representative.

I have lately ascertained, through the kindness of Prince Bonaparte, that this is the species included under the name *Tamatia hyperrhynchus* in his *Conspectus Volucrum Zygodactylorum*, published in the 'Ateneo Italiano' of May last, and I have therefore adopted his specific designation. But no descriptions have yet appeared of the many new species of which the names only are inserted in that and other similar recent publications of the Prince.

The type specimens of the present bird are in the French National collection.

## 2. BUCCO DYSONI.

*Tamatia gigas*, Bp. Consp. Vol. Zygodaet. p. 13?

*Bucco dysoni*, G. R. Gray in Mus. Brit.

*B. supra fulgenti-niger; fronte usque ad oculos et collari postico albis: subtus albus; vitta pectorali lata nigra; lateribus nigro variis; rostro pedibusque nigris.*

Long. tota 9·7; alæ 4·5; caudæ 3·4; rostri a rictu 1·8.

*Hab.* In America Centrali, Honduras (*Dyson*). Mus. Brit.

*Obs.* Species a *Buccone macrorhyncho* fronte latius albo, rostro majore, et ventre pure albo, a *Buccone hyperrhyncho* rostro minore et fronte minus albo diversa, et inter has duas media locanda.

A single specimen of this bird in the British Museum was procured by Mr. Dyson in Honduras. In my Synopsis of this family I have confounded it with its near affines, from which I now think, as might have been expected from the locality, it will bear separation. It is very probable that Prince Bonaparte's name, *gigas* (which was applied to a bird brought by Delattre from Nicaragua), was intended for this same species, but as the type has disappeared, and no specific characters have been published for the name, it is difficult to be certain on that point.

## 3. BUCCO PULMENTUM.

*Tamatia (Nyctactes) pulmentum*, Bp. et Verr. MS.

*B. supra fusco-brunneus; fronte et superciliis rufescentibus; torque angusto nuchali inconspicuo albido; dorsi medii alarum uropygiique plumis partim fulvo terminatis: subtus albus; gutture inferiore pallide rufescente; plaga utrinque gutturali*

*magna cum maculis crebris pectus totum et ventrem (præcipue ad latera) occupantibus atris: rostro nigro.*

Long. tota 5·0; alæ 3·1; caudæ 2·5.

*Hab.* In Peruvia Orientali et regionibus fl. Amazonum superioris: Pebas (*Cast. et Dev.*): Chamicurros (*Hawxwell*). Mus. Paris., Joh. Gould et P.L.S.

*Obs.* Sp. *Bucconi tamatiæ* affiniissima, sed gula pallidior et maculis ventris majoribus et intensioribus differt.

This appears to be a western representative of the *B. tamatia* of Cayenne, from which, however, I think it may be fairly separated. MM. Verreaux of Paris have lately received a considerable number of specimens of it from the Upper Amazon. They all present the same distinctive characters as are above noticed.

#### 4. MONASA PERUANA.

*Monasa peruana*, Bp. et Verr. MS.

*M. plumbescenti-nigra, capite et gutture intensioribus; fronte et menti summa parte albis: rostro ruberrimo.*

Long. tota 11·0; alæ 5·0; caudæ 4·5.

*Hab.* In Peruvia Orientali in regionibus fl. Amazonum superioris: Chamicurros (*Hawxwell*). Mus. Joh. Gould et P.L.S.

*Obs.* Simillima *M. personatæ* sed rostro clarius rubro, mento ad ipsam apicem solum albo haud nisi dubie disjungenda.

My specimen of this bird was obtained from the MM. Verreaux, and carries the MS. name above quoted, which I have thought it as well to adopt. The characters which separate it from its well-known Brazilian representative are certainly very slight, but appear to be constant in at least a dozen examples I have examined from the same locality.

#### 5. BUCCO PICATUS.

*B. supra niger; plaga in summis scapularibus utrinque magna et maculis in pileo rotundis cum loris albis: subtus albus; vitta lata pectorali nigra: cauda nigra, reatricibus tribus utrinque extimis in medio et harum omnium apicibus albo maculatis: rostro pedibusque nigris.*

Long. tota 6·7; alæ 3·2; caudæ 2·3.

*Hab.* In reg. fl. Amazonum superioris; Chamicurros (*Hawxwell*). Mus. Joh. Gould.

*Obs.* Species *Bucconi tecto* forsan nimium affinis, et ob crassitiem majorem, torquem pectoris latiore et caudam minus albo maculatam non sine dubio constituenda.

Mr. Gould's collection contains two examples of this bird, which he has entrusted to me for comparison with its Cayenne representative. It is not, however, without hesitation that I have determined to separate them from it. Besides their larger size and broader breast-band, the white medial square spot extends in the present species only through the three lateral retrices, with a slight trace of it in the fourth.

In the Cayenne bird the outer five pairs are all strongly marked thus. The whole plumage of the bird is also generally more intensely black.

6. MALACOPTILA NIGRIFUSCA.

*Malacoptila fusca*, ex Bogota, Selater, P. Z. S. 1855, p. 136.

*M. nigricanti-brunnea*, plumarum scapis pallide fulvis; loris et plumis mystacalibus cum plaga triangulari super-pectoralis albis: ventre medio crissoque fere unicoloribus, albicantioribus; rostri basi læte aurantia, apice nigro; pedibus nigricanti-brunneis.

Long. tota 6·5; alæ 3·5; caudæ 2·5.

*Hab.* In Nova Granada, Santa Fé de Bogota. Mus. Brit. et Joh. Gould.

*Obs.* Sp. *Malacoptilæ fuscæ* affinissima sed statura minore et coloribus nigricantioribus: rostri basi lætius aurantia.

This New Grenadian bird, which in my Synopsis of this family and List of Bogota birds I united with the true *fusca* of Cayenne, certainly presents considerable claims for specific distinction. The body is generally smaller, the bill in particular is shorter and not so strong, and at the base is of a deep orange colour instead of pale yellow, the black not extending so far towards the base of the upper mandibles; the markings on the head, throat and breast also, are there blacker, and I have therefore named the bird *nigrifusca*. There are specimens of it in the British Museum and in Mr. Gould's collection.

The East Peruvian or High-Amazon examples on the other hand (which are held distinct by some naturalists under Du Bus' title *inornata*) resemble the Cayenne bird much more nearly. After remarking that the white lore-spot is nearly obsolete, and the skins are rather finer and larger, it is in truth difficult (at least with my present examples) to see further differences, and I therefore regard *M. inornata* as a very doubtful species.

Rio Napo specimens are still more like the true *fusca*.

ON SOME NEW SPECIES OF FRESHWATER TORTOISES FROM NORTH AMERICA, CEYLON AND AUSTRALIA. BY DR. J. E. GRAY, F.R.S., F.R.G.S. ETC.

Fam. I. EMYDIDÆ.

The freshwater Tortoises which have been referred to the genus EMTS, as it is at present constituted, may be divided into two very distinct genera; and this is the more advisable as it is extremely difficult to distinguish the American species of which it is composed, and the separation of any of them by organic characters must facilitate the process. The genera may be thus named and defined:—

1. EMTS.

The lower jaw rounded beneath, and covered with the hinder part of the horny beak; the toes strong, covered with broad band-like scales.

This genus includes *E. ornata*, *E. scripta*, *E. Holbrookii*, and many other species, both Asiatic and American.

2. PSEUDEMTS.

The lower jaw flattened beneath and covered with a soft skin. The

toes weak, slender, covered with small scales above, and very broadly webbed.

1. *Pseudemys concinna*.
2. *P. serrata*.

The genera *Batagur* and *Malaclemys* have nearly similar feet, and they appear, like *Pseudemys*, to be the most aquatic animals of the family.

The species which have hitherto been referred to the genus *CISTUDO* differ considerably in their habits, some being nearly terrestrial and others almost exclusively aquatic. The examination of the animal shows that there are good external characters by which they may be divided into natural groups agreeing with their habits and their geographic distribution.

I. The more terrestrial have the front of their legs covered with thick, imbricate, triangular scales, the toes only slightly webbed, and the sternum broad, hiding the legs when withdrawn, as—

#### 1. CISTUDO.

The head rhombic, the forehead flat, and eyes lateral: confined to N. America; as

*C. Carolinensis*, with four, and *C. Mexicana*, with only three toes on the hind feet.

#### 2. LUTREMYS.

The head oblong, depressed, with the eyes on the upper part of the cheek. Found in Europe, as *L. Europæa*.

II. The more aquatic kinds have the front of the legs covered with small scales and some broad, transverse, lunate plates; the toes webbed. They are confined to Asia; as

#### 3. CUORA.

The head rhombic, the eyes lateral, the sternal lobes broad, hiding the legs when contracted, as *C. Amboinensis* and *C. trifasciata*.

#### 4. CYCLEMYS.

The head depressed, eyes subsuperior, the sternal lobes rather narrow, not hiding the legs when contracted, as *C. dentata* and *C. platynota*. The latter species was referred to the genus *Testudo* by F. Müller, and when I first described it I considered it as an *Emys*, but the examination of a series of specimens of different ages shows that it is a species of Box Tortoise nearly allied to *C. dentata*.

It has been hitherto believed that there was only a single species of the genus *KINOSTERNON*, as now restricted, found in the United States; and all the adult specimens I have received from that country are, I must own, exceedingly alike, so much so that I cannot undertake to say that we have adult specimens of more than a single species. On examining the young specimens of this genus from the United States, in the Museum Collection, it is evident that there are at least three most distinct species found in that country, which probably in

their eroded and discoloured adult state are so alike as to be mistaken for one another.

They may be thus described:—

### 1. KINOSTERNON PENNSYLVANICUM.

Head brown-dotted; temples with two parallel distant streaks of white spots, from the upper and lower edge of the orbit, and a third streak across the lower jaw; neck white-dotted; back deep brown; lower side of marginal shields, the axillary and inguinal plates and each of the sternal plates with a large yellow spot; sternum broad, rounded before and behind.

*Hab.* North America, Florida, *E. Doubleday, Esq.*

### 2. KINOSTERNON HIPPOCREPIS.

Head brown, with a broad white streak on each side, from the end of nose over the eyebrows to the sides of the nape; back pale and sternum brown; dorsal shield with a single apical and some scattered black spots; under side of each marginal and sternal plate rather paler in the middle; sternum rather broad, rounded in front and slightly truncated behind.

*K. Pennsylvanicum*, Holbrook, N. Amer. Herp. t. 21.

*Hab.* North America, New Orleans, *E. Doubleday, Esq.*

### 3. KINOSTERNON PUNCTATUM.

Head brown, minutely white-dotted, without any streaks; the back brown, discal shield with a very distinct apical, and some scattered black spots; margin with a very narrow white line; under side whitish, with minute scattered black dots and line; sternum narrow, contracted at each end, and with straight sides behind, rather truncated in front and more distinctly and broadly so behind.

*Hab.* North America.

There are several specimens of the first species of different ages from various parts of the States, in the British Museum; I have therefore retained for it the more general name; and two young specimens and a half-grown one of the second species, and only a single young specimen of the third species; the latter is so distinct, by the narrow form of its sternum, from the other two, that it might be referred to the genus *Aromochelys* if the pectoral plates were not triangular; it may be considered as the species passing towards that genus, and I should think that the adult animal must differ considerably from the common form of *K. Pennsylvanicum*.

### AROMOCHELYS.

The Musk Tortoise, or, as it is more commonly called, the Stinkpot of North America, is easily distinguished from the other *Kinosterna* by the narrowness of the sternum and the humeral plates being square, like the pectoral one, instead of triangular, as they are in *K. scorpoides* and *K. Pennsylvanicum*. For this reason I have proposed to divide them into a distinct group under the name of *Aromochelys*.

I am the more inclined to do so, as there are two most distinct species in the British Museum Collection, which have either been

confounded together by the American naturalists, or have been most unaccountably overlooked. They may be thus defined:—

1. *AROMOCHELYS ODORATA*.

Head moderate, with two streaks from the nose, one above and the other under the eyes, to the side of the neck; the back oblong-convex, the vertebral line rather flattened; the gular plate small, triangular, the humeral plate rather oblique, shield brown, purple-brown spotted.

Holbrook, N. Amer. Herpet. t. 22.

*Hab.* United States and Louisiana.

2. *AROMOCHELYS CARINATA*.

We have four specimens of this species in the Museum Collection. Cat. Tortoises B.M. t. 20 a.

Head very large, black-dotted, without any lateral streaks; back, oblong, very high, the vertebral line high and acutely keeled the whole length, shields grey-brown, spotted and lined with purple-brown; the gular plate very small, linear, transverse marginal, the humeral plate square, transverse, parallel to the pectoral plates.

*Hab.* North America, Louisiana.

There are two species of North American Tortoises which are referred to the genus *CHELYDRA*, which are so differently organized that they are evidently the types of two very distinct genera, which may be thus characterized:—

1. *CHELYDRA*.

Head moderate, rather depressed, covered with a soft skin, chin bearded, neck granular; back with two slight keels; marginal plates in a single series.

*Chelydra serpentina*.

2. *MACROCHELYS*.

Head large, angular, contracted in front, covered with symmetrical horny plates, neck with several series of spinose warts; back with three sharp continued tubercular keels; the lateral marginal plates in a double series.

*M. Temminckii*.

Fam. II. *CHELYDIDÆ*.

When Australia was first visited by Sir Joseph Banks, he brought home with him from New Holland a freshwater Tortoise, which Dr. Shaw described under the name of *Testudo longicollis*. This has been made the type of the genus *CHELODINA*. Recent travellers in Australia have shown that the genus is distributed over the country; each part appears to have a species peculiar to itself. In Capt., now Sir George Grey's Travels, I described and figured a species from Western Australia under the name of *Chelodina oblonga*. In a collection which we have lately received from Haslar Hospital, there are two very large specimens of the genus sent from Swan River by the late Mr. Collie, which, though similar in several respects to

*Chelodina oblonga*, may be considered as a distinct species, which I shall proceed to shortly characterize.

The species of the genus hitherto described have the thorax covered with very thin smooth shields, so transparent that a peculiar black reticulated appearance, which exists between the shields and the bones of the thorax, can be distinctly seen through them. This character is common to *C. longicollis* of New Holland, *C. oblonga*, and Mr. Collie's species from Swan River, which I propose to call, in honour of my late friend and excellent collector—

1. CHELODINA COLLIEI.

The shield oblong, elongate, contracted and revolute on the sides; under side uniform pale yellow.

*Hab.* Swan River, *Alexander Collie, Esq.*

This species agrees with *C. oblonga* in the uniform colour of the back and sternum, which is only varied by the dark lines of the netted appearance before referred to; but it is easily known from that species by its larger size, the much narrower shape, and the lateral margin becoming strongly revolute, and the edge over the hinder limb raised up and rather expanded.

The British Museum have lately received, with some other specimens, from the Australian continent—but unfortunately the special habitat was not indicated—the shell of a Tortoise which has all the characters of the genus as at present defined, except that, instead of the shields on the thorax being thin, submembranous and semitransparent, they are thick, horny and concentrically grooved like the shields of many other genera. It is not accompanied by the head or limbs of the animal, so we have not the means of determining if they offer any characters which, with the peculiar structure of the shell, might render it desirable to form it into a separate genus. It may be defined and thus named:—

2. CHELODINA SULCATA.

Shell depressed, roundish ovate, brown; shield horny, thick, distinctly concentrically grooved.

*Hab.* Australia.

Fam. III. TRIONYCIDÆ.

The species of this family, which have the hind legs covered with moveable flaps affixed to the sides of the hinder lobe of the sternum, named *Cryptopus* by MM. Dumeril and Bibron, may be divided into two very distinct geographic genera.

1. EMYDA, Gray.

The margins of the upper shield strengthened with bones; the sternum with three pairs of callosities and a small odd one behind the anterior pair. Asia.

2. CYCLANOSTEUS, Peters.

The margin of the upper shield flexible, without any bones; the sternum with four pairs of callosities and an odd one behind the two anterior pairs; the pair on the hinder lobes small, far apart. Africa.



It has been usually stated that the only known species of the genus *EMYDA* was generally distributed over India; we have in the British Museum specimens only from the Valley of the Ganges. The young specimens all agree in the head and shell being variegated.

We have lately received a specimen of this genus from Ceylon, collected by Mr. Thwaites, which differs in both the above particulars; and in the Museum of the Society there is the shell of an adult animal, sent home from Ceylon by Dr. Kelaart, which shows that it is a most distinct species. They may be thus characterized:—

1. *EMYDA PUNCTATA*.

Back and upper part of the head pale spotted; the odd anterior callosity small, roundish triangular; the hinder callosity of adult ovate, inner edge semicircular; of young triangular, far apart.

*Hab.* India, Ganges.

2. *EMYDA CEYLONENSIS*.

Back and upper part of the head (in spirits) dull pale olive; lips, chin and lower part of the body whitish. The odd anterior sternal tubercle large, oblong, transverse; the hinder pair of callosities large, close, in adult nearly united, with straight parallel inner edges.

*Emyda punctata*, Kelaart, Prod. Faun. Ceylon. 179.

*Hab.* Ceylon.

Dr. Kelaart, in his work on the Ceylon animals, was not aware of the distinctness of this animal from the continental species; he observes that the head is black-lined when alive.

The new species described in this paper are figured in the Illustrated Catalogue of Tortoises in the Collection of the British Museum.

MISCELLANEOUS.

*On the Vitality of the Anguillulæ of Mildewed Wheat.*

By C. DAVAINÉ.

THE *Anguillulæ* of wheat in the larva state are endowed with the power of remaining dry and apparently dead for several years, and recovering their powers of movement when moistened. This is not the case with these animals after they have acquired sexual organs.

In the larva state also they exhibit a remarkable resistance to the action of violent poisons, provided these are not of a nature to act upon their tissues. The author has found by experiment, that opium, the salts of morphine, belladonna, atropine, strychnine, and its compounds, &c., have no action upon these animals. In a concentrated solution or paste of these substances, they continued to live and move for a fortnight. Nicotine, on the contrary, soon destroys their movements, but not their vitality, for after remaining several days in contact with this substance, they become as lively as ever when freed from it by washing.

Organic matters, and especially animal matters in a state of decom-